



**Indiana
Department of Education**
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Indiana Superintendent of Public Instruction



High Ability Resource Guide for the Indiana Academic Standards for English/Language Arts and Mathematics (2014)

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These High Ability Teacher Resources have been developed to provide equity and supporting materials to help educators successfully implement the Indiana Academic Standards 2014. Use of these resources is optional – teachers should decide which resources will work best in their school for their students. This resource document is a living document and will be frequently updated. Please send any suggested links and report broken links to Amy Marschand, High Ability Education, Indiana Department of Education, marschan@doe.in.gov

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INTRODUCTION

Differentiating the Indiana Academic Standards for High Ability learners

High Ability learners frequently come into a grade level, unit, or lesson with some or all of the intended content already mastered. For that reason, it is important to pre test all students at the beginning of an instructional segment to determine prior mastery and learning needs. High Ability students may be able to be excused from some content due to demonstrated mastery; this “found” instructional time can be used for these students to learn things they do not already know. Comparing pre and post data will allow growth to be documented.

High ability students can master content at a faster pace than the typical learner and they are able to use more complex reading selections, grammar, vocabulary, and problems to solve in math. They can work in standards above grade level in their areas of strength. Research in the field of gifted education has also shown greatest achievement gains for high ability learners when they work in a differentiated curriculum with others of similarly high ability. Instead of doing additional work at the same level, students with high ability need to focus on big ideas that tie disciplines together as well as critical thinking and problem solving of complex issues.

This Handbook of Resources for Teachers of High Ability Students contains information about the system of units developed for K-8 teachers and specifically aligned to the 2014 Indiana Academic Standards, how math should be differentiated, a lesson plan rubric, how the curriculum can include attention to the affective needs of high ability students, a differentiated classroom observation scale, and a glossary of terms related to high ability education.

CURRICULUM UNITS FOR HIGH ABILITY LANGUAGE ARTS K-8

Since 2007, Indiana Code has required school corporations in the state to identify and serve students with high ability in the general intellectual and specific academic domains, K-12. With the adoption of new Indiana Academic Standards in 2014, all Indiana school districts need language arts curriculum that both meets the learning needs of high ability learners and is also aligned to the Indiana Academic Standards. To respond to the need for high quality curriculum, the Indiana Department of Education funded a high ability language arts curriculum project wherein the IDOE contracted with Dr. Joyce VanTassel-Baska to lead Indiana teachers in writing these units.

First time users; <http://form.jotform.co/form/32165696183865>

After initial login <http://moodler.doe.in.gov/>

Alignment of the Project with Relevant Standards

The Indiana High Ability Project has deliberately aligned its framework and underlying units of study with three important sets of standards. These are: the Indiana Academic Standards, the National Association for Gifted Children (NAGC) Program Standards (curriculum and assessment), and the 21st Century Skills Project. By so doing, the project is designed to address all aspects of state requirements, differentiation for the gifted, and future needs of students in preparing for the world of the professions.

2014 Indiana Academic Standards

Each unit of study has been aligned with the 2014 Indiana Academic Standards. Within each unit, lesson plans specify the particular standards addressed. The goals and outcomes of the project are also aligned with the Indiana Academic Standards in respect to emphasis. One additional concept goal has been added to the project that is not addressed in the standards.

NAGC Curriculum and Assessment Standards

These standards represent the professional standards for programs in gifted education across P - 12 levels. More information on the standards can be found at www.nagc.org. The curriculum and assessment standards were used to design the Indiana High Ability Project in respect to:

Curriculum framework development aligned to content standards - The project has defined differentiated goals and outcomes in language arts for gifted learners.

Scope and sequence development - The project has established a set of interrelated units of study for use across K - 8, with a common format, set of goals and outcomes, concepts, and models.

Use of differentiation strategies — The project uses the central differentiation strategies emphasized in the standards including critical and creative thinking, problem-solving, inquiry, research, and concept development.

Use of acceleration techniques including pre-assessment, formative assessment, and pacing — The project uses all of these acceleration strategies as well as advanced literature and other reading selections to ensure the challenge level for the gifted.

Adaptation or replacement of the core curriculum — The project extends the Indiana Academic Standards by ensuring that gifted learners master them and then go beyond them in key ways. Some standards are mastered earlier (e.g. reading and language skills), while others are practiced at higher levels of skill and concept.

Use of culturally sensitive curriculum approaches leading to cultural competency — The project has employed world and multicultural literature to ensure that students have an appreciation for the contributions of different cultures.

Use of research-based materials - The project has included models and techniques found to be highly effective with gifted learners in enhancing critical thinking, literary analysis, and persuasive writing.

Use of information technologies - The project includes the use of visual media, computer technology and multimedia in executing the learning activities developed.

Use of metacognitive strategies - The project focuses students on the use of reflection, planning, monitoring, and assessing their own learning.

Use of community resources — The project includes opportunities for students to learn from experts or to interview a relevant person central to understanding some aspect of their unit of study.

Career development — The project includes biography and autobiography as deliberate tools for students to model on an eminent person. Problem based learning scenarios provide opportunities for students to put themselves in the roles of experts in various fields.

Talent development in areas of aptitude and interest in cognitive, affective and aesthetic domains — The project provides multiple opportunities for students to explore domain-specific interests and communicate in writing, multimedia, and oral expression.

21st Century Skills

The project included a major emphasis on key 21st Century skills in respect to goals and outcomes of the work as well as key activities and assessments employed throughout the units of study. Several of these skill sets overlap with the differentiation emphases discussed above in relation to the gifted standards. The skills receiving major emphases include:

Collaboration - Students are encouraged to work in pairs or small groups to carry out many learning activities and projects, to discuss readings, and to plan presentations.

Communication - Students are encouraged to develop communication skills in written, oral, visual, and technological modes in a balanced format within each unit of study.

Critical Thinking - Students are provided with models of critical thinking that are incorporated into classroom activities, questions, and assignments.

Creative Thinking - Students are provided with models of creative thinking that develop skills that support innovative thinking and problem-solving.

Problem-Solving — Students are engaged in real world problem-solving in each unit of study and learn the processes involved in such work.

Technology Literacy — Students use technology in multiple forms and formats to create generative products.

Information Media Literacy — Students use multimedia to express ideas and project learning.

Cross-Cultural Skills — Students read and discuss works and events representing the perspectives of different cultures. They have opportunities to analyze different perspectives on issues.

Social Skills — Students work in small groups and develop the tools of collaboration, communication, and working effectively with others on a common set of tasks.

Features of the Indiana Units:

In the interest of equity for all districts, as a model of good vertical articulation in curriculum planning, and in keeping with basing curriculum for high ability students upon the needs of high ability learners, each unit addresses the following:

- Individual student growth in accordance with unit goals as demonstrated through the use of pre and post assessments with similar rubrics
- Pre-assessment of prior knowledge for the purposes of planning for differentiation of instruction
- Conceptual focus and activity based upon the work of Hilda Taba (1966)
- Interdisciplinary connections
- Above grade reading skills through the selections of passages from above grade materials or that are more complex or in-depth than those selected for typical learners at a particular grade
- Critical thinking skills through the use of Paul's Reasoning Model. See [www.critical thinking .org](http://www.criticalthinking.org) for more information.
- Creative problem solving skills through the selection of real world problems or issues and the through use of the Creative Problem Solving (CPS) model and Problem Based Learning (PBL). For additional information about these models go to www.creativeeducationfoundation.org for CPS or to the Illinois Math and Science Academy Problem Based Learning Network for PBL at <http://pbln.imsa.edu/index.html>
- Idea organization through the use of various graphic organizers for literature, writing, and vocabulary. For more information on these, go to the College of William & Mary, Center for Gifted Education website, <http://education.wm.edu/centers/cfge/curriculum/teachingmodels/index.php>
- Analysis skills related to informational text and multiple media formats
- Research process skills appropriate to the level of students with high ability
- Metacognitive skills through peer and self evaluation and the use of rubrics
- Collaboration and communication skills through the use of a variety of assessments as well as Socratic questioning. For more information about Socratic seminars, go to www.socraticseminars.com

In addition to the goals of creating units that aligned with the Indiana Academic Standards, 21st Century Skills, the NAGC Curriculum and Assessment Standards stated above, the IDOE also sought to create units that would be:

- Research based with initial units piloted by the teacher developer in his/her own classroom, data analyzed, revised, field tested by other Indiana teachers, data analyzed, externally reviewed, revised.
- Able to be used in multiple service models, including using many parts of the units with general education students of at least average ability with differentiated reading selections and expectations. Note: If used as a replacement to the core curriculum for students with high ability (recommended), an English Language Arts program will need additional grammar and vocabulary

instruction. In this case, consider the work and materials developed by Michael Clay Thompson, published by Royal Fireworks Publishing Co., Inc., www.rfwp.com Instruction in language mechanics and usage will also be necessary.

- Designed to cover approximately 9 weeks, although this time will vary based upon the length of the daily Language Arts instructional period, and the pace of instruction. Field testers reported the units taking 9 – 12 weeks.
- Highly compatible with the use of the William & Mary English Language Arts units published by Kendall Hunt to provide an additional unit of high quality curriculum for students with high ability. These can be found at www.kendallhunt.com
- Using readings from public domain when possible so that district resource requirements are minimal.
- Available to Indiana educators by download from the Indiana Department of Education.
- Use the Integrated Curriculum Model, developed by Dr. VanTassel-Baska, ensuring that the units would be structurally sound, including alignment of goals and assessments, the use of pre and post assessments, a conceptual focus, specific goals and objectives, and careful attention to using instructional models. This structure also allows them to be compatible with other quality curriculum models that may be used in documentation of general education curriculum at the school district level, e.g. Understanding by Design, developed by Jay McTighe and Grant Wiggins (2011).

Indiana High Ability Language Arts Project Goal Statements

Goal 1: To analyze and interpret literature

Students will be able to...

- Interpret literal and figurative meaning of written, spoken, and multimedia texts
- Identify similarities and differences in meaning in literary selections or multimedia pieces
- Make inferences and draw conclusions based on information in given passages or multimedia pieces
- Demonstrate understanding of important structural elements and their application to different types of literature including multimedia pieces.
- Create an objective summary of text or media including the central idea.
- Determine theme and its relationship to setting, character, and plot.

Goal 2: To synthesize and evaluate informational text

Students will be able to:

- Evaluate and apply understanding of text or multimedia features for a specified purpose and audience.
- Synthesize info from multiple sources to defend a point of view or explain historical events or scientific ideas.
- Judge reliability and validity of informational text sources including, but not limited to, internet, periodicals, and other print resources.

- Compare and contrast the most important points and key details presented in two sources on the same topic.

Goal 3: To become persuasive, informational, and narrative writers

Students will be able to:

- Write for multiple purposes and audiences using various media.
- Develop a written persuasive essay, letter, editorial, etc., given a topic.
- Generate a variety of informational pieces.
- Create a number of narrative pieces.
- Write a research paper on a given topic.
- Respond to a prompt (eg. text, art, map, media, etc.) using evidence.
- Complete various pieces using the writing process.
- Assess writing and multimedia communication of self and others.

Goal 4: To develop linguistic competency

Students will be able to:

- Apply knowledge of parts of speech to understand how words function in multiple contexts.
- Develop and use vocabulary at a level in alignment with reading.
- Use correct grammar and syntax in multiple contexts.
- Evaluate effective use of words, sentences, and paragraphs in context.
- Analyze and interpret text containing figurative language and utilize figurative language to convey meaning effectively in written, oral, and technological communication.

Goal 5 : To become effective communicators

Students will be able to...

- Discriminate between informative and persuasive messages.
- Evaluate an oral persuasive message according to main idea and arguments cited to support it.
- Evaluate a multimedia message according to main idea and elements of persuasion or reasoning.
- Initiate and participate in a range of collaborative discussions including giving and receiving constructive feedback. Organize oral and multimedia presentations based on predetermined criteria.
- Utilize appropriate technology and multimedia to effectively communicate.
- Evaluate writing, speaking, and multimedia communication of self and others.

Goal 6: To develop and apply critical and creative thinking (problem solving)

Students will be able to...

- Study, compare, contrast, and utilize a variety of thinking, reasoning, and problem solving models (e.g. Paul's Reasoning, Bloom's Taxonomy).
- Identify purpose of written, spoken, and multimedia communication of self and others.
- Identify problems, ask significant questions, research to find related facts, generate ideas, consider alternatives, and find solutions.
- Acknowledge and consider more than one perspective.

- Evaluate the validity of a claim or source based on evidence or criteria.
- Support a claim or a thesis statement with relevant data or evidence.
- Collaborate on critical and creative thinking (problem solving) activities or products.

NOTE: Consider Habits of Mind: Remain skeptical, active, and open-minded.

Goal 7: To understand the concept of _

Units 1 - 3: Concept of Connections

Students will be able to...

- Judge relationships among objects, places, ideas, and people.
- Formulate original relationships among objects, places, ideas, and people.
- Categorize connections as intellectual, physical, emotional, and/or social.
- Identify and provide evidence of how and why connections change or stay the same over time.

Units 4 - 6: Concept of Change

Students will be able to...

- Recognize that change permeates the universe.
- Classify change in literature according to time.
- Evaluate the positive and negative connotations of the change in a character within the text.
- Evaluate the type of change in the specified event within a given text.
- Evaluate whether a specified change is natural, manmade, or a combination thereof.

Units 7 - 9: Concept of Power

Students will be able to:

- Using multiple texts and media, analyze why individuals or groups apply or suppress their own power.
- Based on multiple perspectives, evaluate the use of power as being good or evil.
- Demonstrate how power provides freedom of choice.
- Evaluate the cause and effects of situations where power is sustained, transferred, or uprooted.

NOTE: These units, while research based, are NOT designed to be a "core reading program." They may be used to supplement a core reading program. If students can demonstrate that reading skills are mastered through pre-assessment, students can use this instructional time on more challenging material.

Grading and Assessment

Each unit contains a set of pre and post assessments that may be used to determine student growth in some of the major areas of language arts during the implementation of the unit. These assessments are performance-based in orientation, requiring students to engage in an elaborated response to the prompts provided. These assessments provide teacher data on growth of high ability learners in concept development, in nonfiction text analysis, in persuasive writing, and in grammar. Rubrics are provided.

NOTE: These were the assessments used in the research phase and may be the same within a band of grade levels. If your district is using the units at multiple grade levels, you will want to review these in advance with the teachers in the adjacent grades to determine if changes need to be made so students are not repeating the assessments.

Pre-Post Concept Assessment: This assessment demonstrates student growth in understanding key generalizations about the concept studied throughout the unit. It asks students to cite examples, categorize, and make generalizations about the concept.

Pre-Post Informational Text Assessment: This assessment requires students to use higher level critical reading skills to interpret a preselected nonfiction reading, grounded in subjects beyond the language arts. They are asked to summarize the passage and make inferences.

Pre-Post Persuasive Writing Assessment: This assessment requires students to write a persuasive essay based on a prompt. They must be able to handle data, claim, and warrant elements in their writing. Prompts vary by grade level clusters of K-2, 3-5, and 6-8.

Pre-Post Grammar and Usage Assessments: This assessment requires students to work with the grammatical principles of form (parts of speech), function (use of parts of speech in sentences), and selective combination (use of differing sentence patterns). It also probes their knowledge of usage principles such as subject-verb agreement, punctuation, and capitalization.

Products developed, based on research and problem-solving activities, are also evaluated by teachers, using well-developed rubrics. Key activities are also employed to judge student progress in the unit. Teachers may decide how and if they wish to weight certain goals in the unit over others, what pieces of data they want to include for grading students within the unit, how they wish to grade oral participation, etc. From the data collected across assessments, teachers may also derive a grade for unit work. The teacher can control how the pre-post assessment results or learning activities within the unit contribute to a student's grade in the unit.

It is recommended that BOTH the unit work samples and the assessments be used in assigning a grade to students for the work in the unit. Between the two approaches, both formative and summative data are available for teachers to make decisions. The use of the rubrics within the unit and the pre/post assessments allow teachers to have communications with students and their parents about their growth during and at the end of the unit. It should also provide data to the teacher about which standards, goals, or lessons should have additional emphasis during the remainder of the year for the class or for individual students or in future years when using the unit with other groups of learners.

Student Grouping and Differentiation

Students with high ability should be grouped for instruction with others of similar ability and/or readiness. The greatest gains in student achievement have been found when students are grouped for instruction on a daily basis, when curriculum and instruction are accelerated and differentiated, and when students have opportunity for investigations of their own interest (Rogers, 2007).

As previously mentioned, Indiana requires students identified with high ability in core academic domains to be provided with appropriately differentiated curriculum and instruction. While the particular service model may vary, most schools in Indiana group students for instruction at least part of the time. A cluster

grouping model is commonly utilized which puts identified students together in one classroom at the grade level, along with a restricted instructional range of learners making up the remainder of the class. The Indiana High Ability Language Arts Units are designed for use with a group of students with high ability in language arts, but the units can be used successfully in mixed ability classrooms as long as the range of learners does not include those with below grade level skills. This can be done in two ways. Two groups can operate independent of one another, with the high ability students having this unit. Or, the unit can be used for all students with the reading selections and some of the other elements made more accessible as needed for more typical learners in the class. This will vary according to local circumstances and decision. All units need differentiation to accommodate individual levels of readiness, even with a population of students all of whom have been identified as having high ability in language arts. The units were piloted and field tested with demonstrated student gains in a variety of classroom types and school district demographic characteristics.

MATH AND THE ART OF PROBLEM SOLVING

Basic guidelines for high ability math:

- Students with high ability in the area of mathematics should be pre-tested for mastery of particular topics in order to determine where their instruction should begin.
- In developing talent in the area of mathematics, one uses a combination of acceleration and enrichment.
- For differentiation within advanced math classes, teachers can use guided math groups in the same way that guiding reading groups are used. Students are grouped within the classroom according to pretest results or ease of grasping concepts. Groups can be provided with problems at their level of challenge.
- In addition to demonstrating mastery of standards, students should be provided with rich problems that require the use of analytical reasoning. Additional topics, especially using number theory, probability, logic, graph theory, set theory, and strategy (discrete math topics) form the basis of an understanding of many real world math applications, including computer programming. There is much to teach in mathematics beyond the traditional sequence. These can be fun and allow for a great deal of creativity.

Sources of such problems:

This has a free online system for working problems. It has many problems to work and many short videos that explain the solutions. Investigate more at:

- <http://www.artofproblemsolving.com/>
- MathCounts problem of the week. Visit <https://mathcounts.org/handbook>
- <http://wildaboutmath.com/math-contest-problem-web-links/>
- <http://www.moems.org/program.htm>
- <http://www.noetic-learning.com/>

Examples of larger concepts: balance, proof, part of a whole, relationships, quantification, functions, properties, patterns, similarity, reflection, order, congruence, attributes

Examples for Problem Based Learning: (taken from <http://pbln.imsa.edu/model/scenarios/>)

6th grade mathematics: The principal asks the students, who are sharing lockers, to calculate how much storage space a typical student needs, because the school is going to purchase new lockers. How many and what kind of lockers should the school purchase, given its budget. (volume and surface area, costs, aesthetics and alternative storage approaches)

Algebra: A local man wins a large amount of money in the lottery and asks for advice on how to invest his winnings wisely. (investing, investment terms; contact with local tax advisors, investment advisors and financial institutions to understand how the financial industry works)

7th/8th grade mathematics: The business office investigates ways to conserve energy use in schools. The principal appeals to mathematics classes to analyze current and future energy usage and make recommendations. (alternative energy sources, cost/benefit analyses, graphs)

Sample Problem (number theory):

Alice and Bob play a game involving a circle whose circumference is divided by 12 equally-spaced points. The points are numbered clockwise, from 1 to 12. Both start on point 12. Alice moves clockwise and Bob, counterclockwise. In a turn of the game, Alice moves 5 points clockwise and Bob moves 9 points counterclockwise. The game ends when they stop on the same point. How many turns will this take?

6 8 12 14 24

Math Resources

The following list was constructed by

Dr. Ann Lupkowski-Shoplak, Director, C-MITES Carnegie Mellon University www.cmu.edu/cmities

Dr. Susan G. Assouline, Professor of School Psychology and Associate Director, Belin-Blank International Center for Gifted Education and Talent Development, University of Iowa, <http://www.education.uiowa.edu/belinblank>

Ideal Solutions® for Math Acceleration is a web-based system that uses above-level testing scores to generate an individual student report about readiness for advanced math. <http://www.idealsolutionsmath.com/>

ALEKS (Assessment and LEarning in Knowledge Spaces) are Web-based math courses, which are very complete in their topic coverage. http://www.aleks.com/about_aleks

Educational Program for Gifted Youth (EPGY): Ventura Hall, Stanford University, Stanford, CA 94305- 4115. Computer-based correspondence courses in mathematics, mathematical sciences, and expository writing for academically talented students in kindergarten through 12th grades. <http://epgy.stanford.edu/>

American Mathematics Competition (formerly the AHSME): Any student who has not graduated from high school is eligible. High scoring students move on to the American Invitational Mathematics Exam, USA Mathematical Olympiad, and International Mathematical Olympiad. American Mathematics Competition, University of Nebraska-Lincoln, www.unl.edu/amc

American Regions Mathematics League (ARML). An annual national mathematics competition for high school students. ARML is held simultaneously at three sites: Penn State, The University of Iowa and San Jose State University. www.arml.com .

MATHCOUNTS: is a series of competitions designed for 7th and 8th graders. It is a four-stage, year-long program run jointly by the National Society of Professional Engineers, the National Council of Teachers of Mathematics, NASA, and the CNA Foundation. www.mathcounts.org

MOEMS: Mathematical Olympiads for Elementary and Middle Schools. This is an in-school academic year competition for students in 8th grade and younger. There are two divisions: "E" for grades 4-6, and M for grades 6-8. www.moems.org

Parents' Guide to Requesting Credit and/or Placement for Your Child's Course Work (retrieved from <http://www.cty.jhu.edu/bin/q/h/parentguide.pdf>) Developed by the Center for Talented Youth (CTY), this excellent document walks families through the process of working with their schools after their student takes a Talent Search summer course.

Printed Materials

The Art of Problem Solving by Richard Rusczyk offers a series of print and web-based texts designed for academically talented students.

Competitions: Maximizing your abilities by Karnes, F. A., & Riley, T. L. (1996) and published by Prufrock Press, Waco, TX. This book lists many different contests and competitions.

Directory of Science Training for High Ability Pre-college Students: Free. Send requests to: Science Services, 1719 N Street NW, Washington, DC 20036. www.sciserv.org/stp.

Educational Opportunity Guide from Duke University's Talent Identification Program (TIP). This guide is published annually. Lists many summer and school-year programs throughout the U.S. Students who score high in TIP's Talent Search get a free copy. Contact TIP, 1121 W. Main St. Suite 100, Duke University, Durham, NC 27701. www.tip.duke.edu.

Iowa Acceleration Scale (3rd ed.), developed by Assouline, S. G., Colangelo, N., Lupkowski Shoplik, A. E., Lipscomb, J., & Forstadt, L. (2009) and published by Great Potential Press, P.O. Box 5057, Scottsdale AZ 85261 or www.giftedbooks.com/. This guidance instrument provides a systematic and thorough method of decision-making for educators and parents who are considering whole-grade acceleration for students in kindergarten through 8th grade.

Math Coach: A parent's guide to helping children succeed in math by Wickelgren, W. A., & Wickelgren, I. Published by the Berkley Books, New York.

Peterson's Summer Opportunities for Kids and Teenagers. This publication is a source of information about summer "camps" and is updated annually. Order copies through a local bookstore or call 1-800-338-3282.

Resource Guide to Mathematics Curriculum Materials for High-Ability Learners in Grades K-8 by Johnson, D. T. and Sher, B. T. (1997). Williamsburg, VA: Center for Gifted Education, The College of William and Mary.

Teachers nurturing math-talented young children (RM96228) by Waxman, B., Robinson, N. M., & Mukhopadhyay, S. (1996). Storrs, CT: The National Research Center on the Gifted and Talented, University of Connecticut.

Sources of Math Enrichment Materials

AMSCO School Publications, www.amscopub.com. The Center for Talented Youth (CTY) at Johns Hopkins University distributes materials explaining the

curriculum they use and publishes other resources for teachers. <http://cty.jhu.edu/schools/index.html>
Creative Publications, www.wrightgroup.com. Dale Seymour Publications, has joined with other companies to form Pearson Learning.

www.pearsonlearning.com. ETA/Cuisenaire, www.eta-cuisenaire.com Free Spirit Publishers

www.freespirit.com/Mathematical Association of America, Sponsors the American Mathematics Competitions leading to the

International Mathematical Olympiad. www.maa.org/The Math Forum www.mathforum.org/National Council of Teachers of Mathematics,. Publishes books helpful in teaching mathematics in addition to the journals, Mathematics Teacher, and Mathematics Teaching in the Middle School.

www.nctm.org/Zephyr Press, www.zephyrpress.com

Websites

Davidson Institute: www.ditd.org This site is a comprehensive resource for parents and educators. It includes an interactive, comprehensive database of use for both parents and students.

MathematicseducationatNorthernKentuckyUniversity: www.nku.edu/~mathed/gifted.html

Math Forum: <http://mathforum.org> This is an excellent resource for math students and teachers. Students can find answers to their burning math questions in the Ask Dr. Math section. The Internet Mathematics Library offers lesson plans, resources, and games. The Problems of the Week are designed to provide creative, non-routine challenges for third through 12th grade students. Other sections on this site include mathematics appropriate for kindergarten level through graduate school.

The Hoagies gifted website <http://www.hoagiesgifted.org/> is a classic resource for gifted education. One of the pages within that website is specifically for math-talented students: <http://www.hoagiesgifted.org/math.htm> It contains links to many other math-related websites that students will enjoy.

HIGH ABILITY LESSON PLAN RUBRIC

Ginny Burney, Ph.D. March 2011

Elements	Novice	Developing	Expert	Score
Title and Annotation 5 points	Gives only the title and grade level	Contains most elements but lacks description.	Subject/ grade level, title clear and descriptive, gives brief description of what/why/how students are learning.	
Learning Objectives 15 points	Objectives are brief, vague, or confusing.	Includes some good objectives, but may not be complete in how the lesson relates to the overall objectives of the unit and/or how the lesson's objectives will be assessed	Includes both Big Ideas and specific objectives for what students know, understand, and will be able to do as a result of the lesson. Appropriate for gifted students; content is substantive and conceptual.	
Indiana Academic Standards 5 points	Standards are grade level only and include no interdisciplinary standards or skill references.	Standards include some above grade level.	Standards for state or content area are explicit. Includes some above grade level. These will be interdisciplinary (when possible) and include skills to be learned over time.	
Materials and Resources 15 points	Materials listing may be incomplete. Attachments of handouts needed during the lesson may be missing.	Listing of materials is included, but clarity or level of detail is lacking. Attachments are included.	All needed materials are fully listed; weblinks are given if used; handouts are attached; media and technology needs are fully listed. Materials are more in-depth than grade level.	
Lesson and Learning Activities 30 points	<p>Length of lesson is noted but not broken down.</p> <p>Outline is vague, lacking detail, and/or confusing.</p> <p>Unclear how learning activity will lead to objective.</p>	<p>Lesson length is noted and broken down in how long the various parts will take, but is not realistic.</p> <p>Outline is clear but strategy chosen may not be engaging and/or appropriate for high ability learners and/or likely to lead to attaining objectives.</p>	<p>Length of lesson is noted and broken down realistically.</p> <p>Clear and detailed outline of instructions for the teacher; flows smoothly. Strategy chosen is likely to lead to achieving objectives.</p> <p>Learning activities are likely to be engaging. Strategies and activities appropriate for gifted learners are inquiry based, constructivist, etc.</p>	

<p>Differentiation</p> <p>15 points</p>	<p>Opportunities for further differentiation are not embedded; limited to teacher adjustment on the spot.</p>	<p>Opportunities for further differentiation are embedded but may not include differentiation for readiness.</p>	<p>There are opportunities for further differentiation within the group of high ability students. These opportunities include differentiation according to level of content mastery.</p>	
<p>Assessment of Student Learning</p> <p>15 points</p>	<p>The plan for assessing learning as a result of the lesson is vague, cursory, and/or only paper/pencil. This contains only assessment at a knowledge or comprehension level.</p>	<p>Student products are linked to objectives, but perhaps not to the Big Ideas or higher level thinking. Rubrics or exemplars may be missing or lack clarity.</p>	<p>Student products, assignments or activities give evidence of attaining specific objectives as well as the Big Ideas of the unit. Rubrics and exemplars are given so students can develop their own self monitoring of quality work. The focus is on higher level thinking. Products are multifaceted.</p>	

NOTES: All lesson plans are viewed through the lens of being appropriate for students with advanced potential. All work is expected to be original to the author of the Lesson Plan; if parts are NOT original, all work must be correctly cited.

INDIANA REQUIREMENTS FOR SERVING HIGH ABILITY STUDENTS

The Indiana Code sets forth certain requirements for Indiana school corporations related to the education of students with high ability. Indiana Administrative Code gives further explanation for some of these requirements. The requirements are summarized below.

The corporation must:

1. Identify students with high ability in all grades, K-12, in accordance with the Indiana Definition of High Ability Student. The Indiana definition is: "High ability student" means a student who: performs at, or shows the potential for performing at, an outstanding level of accomplishment in at least one (1) domain when compared to other students of the same age, experience, or environment; and is characterized by exceptional gifts, talents, motivation, or interests.

While there are additional domains of high ability that *may* be served (for example, visual and performing arts), the required domains of high ability that Indiana schools must identify for are the General Intellectual and Specific Academic domains. For now, the designations are for students with high ability in Language Arts (HA-LA), students with high ability in Math (HA-Math), and students who have high ability in both Language Arts and Math (HA – General Intellectual)

2. Record the relevant designation on the Student Test Number (STN). HA-LA, HA – Math, or HA-General Intellectual
3. Provide "appropriately differentiated curriculum and instruction" to identified students in the relevant core content area(s).
4. Provide professional development in high ability education.
5. Establish a Broad Based Planning Committee that will meet at least once per year to review the program.
6. Evaluate the program.
7. Align with the strategic and continuous school improvement and achievement plans.
8. Report annually to the IDOE on the programs and how the state grant to the corporation for high ability programs was used.
9. Report on the results of the program, including student achievement and program effectiveness.

NOTE: New Reporting Requirement as of July 1, 2014: SECTION 6. IC 20-32-5-13.5 IS ADDED

The department shall disaggregate from the total results of the ISTEP program test results for a school corporation the percentage of students in each school and each grade in the school corporation that are identified as high ability students (as defined by IC 20-36-1-3) by the school corporation who also achieved a score in the highest performance level designated for the ISTEP test.

In the Administrative Code, it is also stated that each school corporation must have written plans available for public inspection in the following areas to qualify as a differentiated program for high ability students:

- A multifaceted student assessment plan.
- A curriculum and instructional strategies plan.
- A counseling and guidance plan.
- A systematic program assessment plan.
- A professional development plan.

SERVICES FOR STUDENTS WITH HIGH ABILITY

The need for comprehensive and continuous levels of services for students of high ability that are differentiated to meet their academic, social, and emotional needs has been well documented. According to Reis, Burns, & Renzulli (1992), elementary students of high ability spend as much as 50% of their time working with curriculum they have already mastered. When the general education curriculum fails to provide new learning experiences and skills for students who have already mastered the standards being taught, these students do not have an appropriate learning environment and are being denied appropriate educational services. If students of high ability are to make continuous intellectual growth and “adequate yearly progress” then students of high ability must be provided curriculum that ensures they will learn something new every day.

A comprehensive review of the research (Rogers, 2007) indicates that services leading to the greatest achievement gains for high ability students include the following:

- Acceleration: Opportunities for various forms of content, subject and grade acceleration as needed
- Differentiation: Differentiation in pace, amount of review and practice, focus on larger concepts, and interdisciplinary connections
- Daily Challenge: Opportunity for daily challenge in identified areas of high ability
- Ability Grouping: Opportunities for high ability learners to socialize and to learn with like-ability peers
- Independent Work: Opportunities to work independently in areas of passion and talent.

Services for students of high ability must be interrelated with the general education program. Services must be designed from a theoretical, research-based, and practical perspective. Programming and services must also reflect the knowledge of how students of high ability develop and learn. This programming must include appropriate curriculum, acceleration, instructional strategies, assessment, and evaluation. One specific type of programming for students of high ability cannot meet the needs of the many levels and types of talents and abilities evidenced by these students, K-12. Therefore, a variety of services and programming options are needed and described below.

When planning appropriate programming and services for students of high ability, corporations must consider:

1. How different students will be grouped, organized, or provided with individual plans for the most effective learning;
2. What training the teacher has or needs to most effectively teach and plan learning experiences for students of high ability;
3. What content, standards, and pace are most appropriate for these students; and
4. What instructional models, strategies, projects, and products are most appropriate and will promote academic growth.

Services for high ability students are included on the Multifaceted Student Assessment Plan and are reported on the high ability grant final report submitted to the IDOE.

MEETING AFFECTIVE NEEDS OF HIGH ABILITY STUDENTS IN THE CLASSROOM

Each child, regardless of ability, has his/her own personality characteristics that lead to certain social and emotional needs. In addition, each child has needs that arise because of the situation or environment in which he/she lives. Children with high abilities, however, may have additional affective needs resulting from their increased capacity to think beyond their years, greater intensity in response, combinations of unique interests, personality characteristics, and conflicts that are different from those of their age mates. It is important to provide a systematic and differentiated program of affective services, K-12, for these students; this proactive approach will facilitate development of their high potential and promote positive adjustment. The plan will be most effective if the construction is a collaborative effort among the high ability coordinator, teachers of high ability students, and guidance counselors.

Social and Emotional Issues

The social and emotional issues below are common among high ability students and, as such, would be important to include in the affective curriculum. Some topics may be covered in multiple years with an increasing degree of sophistication or through addressing a different facet of the same issue. Many of these can be discussed through classroom curricula using literature and nonfiction selections, school citizenship, and through the discussion of historical figures and dilemmas.

Overexcitabilities

Gifted students may have “intensities” that may manifest themselves in one or more of these areas (Dabrowski’s Theory):

- Intellectual intentness and focus on a particular topic.
- Greater sensitivity to environment (appreciation for music or art, sensitivity to loud noises or bright lights, more allergies, etc.).
- Surplus of physical energy
- Vivid imagination and creativity
- Heightened emotional sensitivity (reaction to criticism, perfectionism, empathy, attachment).

Asynchronous Development

Physical, cognitive, and emotional development may be at different places within the same child:

- Presents a number of problems for the child with exceptional abilities.
 - Adults, accustomed to advanced verbal reasoning from the child, may fail to understand emotional outbursts more typical of his/her chronological age.
 - The child may find it difficult to communicate with age mate peers who are considerably below her intellectual level, even if they are at the same level emotionally.
- In general, the greater the level of ability, the greater the discrepancies.

Perfectionism

- High ability students may place unrealistically high standards for performance on themselves. May result in anxiety, frustration, or self-blame for less-than-perfect performance.
- Feel as though others (parents or teachers) have unrealistically high expectations. This may result in fear of failure, avoidance of challenges, depression, and connection of self-worth to performance.
- Develop unrealistically high standards for the performance of others.

Self-esteem/Identity issues

High ability students may experience difficulty constructing their identities, which may lead to lowered self-esteems. Difficulty with identity development may result from any of the following:

- Lack of understanding of higher abilities and their implications
- Feeling different from one's same-age peers
- Behaviors inconsistent with gender role expectations (e.g., sensitivity in gifted boys, assertiveness in gifted girls)
- Being identified as learning disabled as well as having high abilities
- Differences resulting from cultural, linguistic, or SES differences

Other topics to be included that, although not specific to gifted individuals, are still important to overall affective development and may interact with giftedness in the following ways:

Introversion: gifted individuals are more likely to be introverted than the general population (50% of gifted population compared to 25% of general population).

Peer pressure: high ability children may struggle more with peer pressure; they are already feeling different from their peers as a result of their ability differences, yet still want to fit in socially.

Bullying: high ability children may be targets for bullying, and they may also bully themselves.

Competitiveness: high ability children are frequently accustomed to doing well and may need guidance in developing healthy attitudes toward competition with others.

Social skills: because of advanced vocabulary, increased intensity, and/or different interests, high ability children may experience difficulty interacting socially with the same-age peers.

Dealing with stress: high ability students may feel stress from perceived expectations and demands from others.

Responsibility: high ability children may be given more responsibilities by teachers and parents and therefore need guidance in learning how to manage these responsibilities to self and others.

Acceptance: high ability children need guidance in developing appreciation for others with different abilities.

Family dynamics: high ability may influence family dynamics with regard to expectations and parental pressure.

Study habits: high ability students often lack good study skills, as they frequently can earn solid grades without effort. In later grades, when faced with challenging coursework for the first time, high ability students lacking study skills may avoid the challenge, fail, or experience undue stress and self doubt from lack of preparation.

Leadership skills: as high ability individuals often seek out, or are called upon to assume leadership positions, they need guidance in developing these skills.

College and Career Readiness

High ability learners are often multi-talented, and this can cause more difficulty in making career decisions. Special care should be taken to ensure students the opportunity to explore career possibilities and to assist them in aligning these possibilities with interests and abilities. Assistance is often needed to recognize where interests and abilities might be used in college planning and career decision-making. Integrating an understanding of professionals and what they do within the curriculum can begin as early as kindergarten for these students.

Examples of Strategies to use in Addressing Affective Issues for High Ability Students

Discussion Groups

It is important that general discussions at all levels include such topics as respecting others, accepting differences, conflict resolution, managing stress, setting goals, being a good friend, valuing community service, developmentally appropriate concerns, etc. These are not specific to the needs of children with high abilities, but they help all children get along with others and develop in a healthy way. However, it will be important for there to be opportunities for high ability students to be together and discuss those issues that specifically relate to being different from others.

Guided Reading or Guided Viewing

Guided reading, also referred to as bibliotherapy, is the use of reading specific, targeted selections to promote personal growth and development. Guided viewing is a natural extension to guided reading, and it has several more advantages to offer: many movies targeting adolescents portray gifted characters; movies may be more appealing to visual learners than books; and movies are a central part of American culture, so students may be more receptive to discussing topics through films.

Role Playing

With this strategy, groups or pairs of students are given scenarios dealing with an affective problem in which they assume the roles of the characters, act out the scenario, and devise a solution to the problem. Role playing provides a psychologically safe venue for high ability students to explore values and beliefs regarding social and emotional dilemmas.

Journal Writing

School counselors or teachers of high ability students may want to consider journal writing a strategy for unpacking these students' thoughts and feelings on affective issues. Corresponding back and forth through

journal prompts can be a way to open up channels of communication between high ability students and their teachers or counselors regarding sensitive topics.

Spatial Strategies

Mind maps, also called concept maps, can be an effective strategy to facilitate high ability students' comprehension of social and emotional issues as well as a means through which they can brainstorm solutions to problems.

Mode Switching

Mode switching involves using multiple methods of representation to explore topics and facilitate understanding. Such methods may include figures, symbols, words, musical interpretations, feelings, or even actions. This transformative process is effective because it requires deeper mental processing of information which leads to better understanding and synthesis of information.

Additional Resources Available

- “Guiding Students with High Abilities: Social and Emotional Considerations” is an IDOE resource available for download in a PDF in the Learning Connection and the IDOE High Ability website. This resource includes the following:
 - Chart of common characteristics of high ability students and their possible negative classroom manifestations.
 - Descriptions of Common Social and Emotional Issues faced by high ability students
 - Tips for parents, teachers, and counselors of high students
 - Resources for addressing the social and emotional needs of high ability students
- “Activities and Resources for Affective Education of High Ability Students in Indiana” is an IDOE resource available for download in a PDF in the Learning Connection. This document includes examples of activities to use with high ability students in small groups at elementary, middle and high school levels.
- Sample Affective Curriculum for High Ability Students at the Elementary Level: This sample curriculum includes quarterly lessons for high ability students grades K-5 that address social/emotional needs and career guidance. It is available for download in the Learning Connection.
- The Indiana Association for the Gifted provides resources for high ability coordinators and parents and teachers of high ability students. Visit www.iag-online.org.
- The organization SENG (Supporting the Emotional Needs of the Gifted) has resources for addressing the social and emotional needs of high ability students. Visit www.sengifted.org

ASSESSING CLASSROOM DIFFERENTIATION PROTOCOL AND SCORING FORM

Revised from the original: Cassady, J. C., Speirs Neumeister, K. L., Adams, C. A., Dixon, F. A., Pierce, R. L. (2004). The Differentiated Classroom Observation Scale, *Roeper Review*, 26, 139-146.

- Preparation:** Before doing the observation, the observer will contact the teacher to find a time that is convenient for the observation. The following will need to be arranged before the observation date:
 - Permission to observe from teacher
 - Copy of lesson plan - let the teacher know in advance what types of things to include or if there is a particular format to use
 - Teacher will visually identify targeted group of students in classroom (with color-coded name tags or teacher's chosen strategy)
 - Teacher is made aware that there is a brief (5 minutes or so) pre-observation interview, and a short post-observation debriefing.
- Pre-Observation Interview - Review Lesson Plan before the interview. For the interview, use questions/record answers on the ACD Scoring Form** - *This is an informal interview that is merely to gain essential descriptive information in order to inform the observation.*
- Classroom Observation and Scoring** - Use the Instructional Activity Codes below and on the next page to assist in recording what is seen in the observation during 5 - 10 minute segments. Use the ACD Scoring Form to record the codes and assessments. There are other questions on the Scoring Form to complete during this phase as well.
- Post-Observation Debriefing** - Follow directions on the ACD Scoring Form
- Reflection** - Add final comments after leaving the classroom.

Codes for Levels of Engagement, Activity, Learning Director, & Classroom Management

These are global ratings for each 5-minute segment. Thus, each segment will have only one rating for each of these domains, the rating that is most representative of that time period for that group.

Student Engagement	Pace of Instruction	Cognitive Activity	"Learning Director"	Classroom Management
<p>L - Low engagement = 20% or fewer of students engaged in learning</p> <p>M - Moderate engagement = 21 - 79% of students engaged in learning</p> <p>H - High engagement = 80% or more students engaged in learning</p>	<p>S - Too slow = students losing interest or not paying attention</p> <p>R - Right = seems to be right with students able to keep up but not losing interest</p> <p>F - Fast = students having a hard time keeping up, may be some evidence of giving up</p>	<p>Remember Understand Apply Analyze Evaluate Create</p> <p>Ratings are made in each segment following the given scale:</p> <p>1 - Not evident 2 - Evident 3 - Well-represented</p>	<p>Who directs the learning, or makes the decisions about the learning activities.</p> <p>Use this scale for making your segment ratings for the identified groups:</p> <p>1 - Teacher directs all learning. 2 - Teacher directs most learning. 3 - Teacher and student share learning decisions 4 - Student directs most learning 5 - Student directs all learning</p>	<p>Students were on task and productive. Group procedures were clear, established, and understood by the students.</p> <p>Ratings are made in each segment following the given scale:</p> <p>L - Low - Students unclear on tasks M - Moderate - Some wasted time H - High - Students on-task</p>

Five-Ten Minute Segment Scoring Codes (use ACD Scoring Form)

During the observation period, please indicate for each 5-10 minute segment which of the following instructional activities listed below were in practice. There will be at least one per segment, and each segment will likely have more than one. The segment ratings should be marked separately for the two groups of students: "Identified" and "Not identified." In the event that there is no way to distinguish between the two groups, make whole-group ratings in the "Not Identified" group location only. If the entire class has been identified as having high ability in the general intellectual domain and/or in the particular subject being observed, record the observations in the "Identified" group location. Feel free to make a note on what the activity was. In addition to the instructional activities, please also rate student engagement, cognitive level, "Learning Director," and classroom management for each 5-10 minute segment.

Instructional Activity Codes

Instructional Activity- How	Code	Description
Lecture /Teacher Presentation	L	Teacher presenting to group of students; teacher demonstrating how to execute a task (e.g., working a math problem on board, how to use lab equipment); teacher may ask some questions of students
Class Discussion	CD	Discussion with whole class, students are primary discussants
Student Led Presentation, Demonstration, Drama, or Discussion	SL	Student(s) presenting information to the class (either planned presentation or on-demand task), demonstrating how to do a task, or leading the discussion
Student Responding	SR	Student(s) answering questions posed by teacher (e.g. spelling bee, review questions, working problems at the board, choral response)
Small Group Work	GW	Students working in small groups; could be discussing, working on academic assignments, or on a cooperative task
Manipulatives or Hands-On	M	Student(s) working with concrete materials to illustrate abstract concepts (e.g., math blocks, science models)
Use of Graphic Organizers or Other Visuals	GO	Student(s) using visual tools to illustrate concepts
Activities Differentiated by Readiness	ADR	Student(s) working with planned activities differentiated according to level of readiness
Activities Other	AO	Student(s) working with activities possibly differentiated by interest or learning style, but not necessarily
Seat work-Individual	SWI	Student(s) working at desk on academic materials (independently)
Teacher interacting with individual student	TIS	Teacher working with/talking to/helping individual student
Teacher interacting with small group	TIG	Teacher working with/talking to/helping small group of students
Technology use-Students	TS	Technology being used by students for related learning activities
Technology use-Teacher	TT	Technology being used by the teacher for presenting content
Assessment by Teacher	TA	Teacher is monitoring/ assessing student work
Assessment activity	A	Student(s) engaged in a formalized assessment activity (e.g., test; performance)
Other	O	List "other" activities
Instructional Activity - What	Code	Description
Student Choice	C	Student(s) can select topic, resource, activity, product
Independent Study	IS	Student(s) do independent investigations and research
Real Audiences	RA	Student(s) present to/prepare for outside reviewers or audiences
Advanced Content	AC	Content is advanced, e.g. from supplementary materials, above grade level, from primary sources, not adopted texts

Assessing Classroom Differentiation Scoring Form - Revision for Field Study							
Teacher _____		Date/Time _____		Observer _____			
Time segment		1	2	3	4	5	
Identified	Activity						
	Student Engagement	<input type="checkbox"/> L <input type="checkbox"/> M <input type="checkbox"/> H	<input type="checkbox"/> L <input type="checkbox"/> M <input type="checkbox"/> H	<input type="checkbox"/> L <input type="checkbox"/> M <input type="checkbox"/> H	<input type="checkbox"/> L <input type="checkbox"/> M <input type="checkbox"/> H	<input type="checkbox"/> L <input type="checkbox"/> M <input type="checkbox"/> H	
	Pace of Instruction	<input type="checkbox"/> S <input type="checkbox"/> R <input type="checkbox"/> F	<input type="checkbox"/> S <input type="checkbox"/> R <input type="checkbox"/> F	<input type="checkbox"/> S <input type="checkbox"/> R <input type="checkbox"/> F	<input type="checkbox"/> S <input type="checkbox"/> R <input type="checkbox"/> F	<input type="checkbox"/> S <input type="checkbox"/> R <input type="checkbox"/> F	
	Cognitive Activity	Remember	① ② ③	① ② ③	① ② ③	① ② ③	① ② ③
		Understand	① ② ③	① ② ③	① ② ③	① ② ③	① ② ③
		Apply	① ② ③	① ② ③	① ② ③	① ② ③	① ② ③
		Analyze	① ② ③	① ② ③	① ② ③	① ② ③	① ② ③
		Evaluate	① ② ③	① ② ③	① ② ③	① ② ③	① ② ③
	Learning Director	① ② ③ ④ ⑤	① ② ③ ④ ⑤	① ② ③ ④ ⑤	① ② ③ ④ ⑤	① ② ③ ④ ⑤	
Classroom Management	<input type="checkbox"/> L <input type="checkbox"/> M <input type="checkbox"/> H	<input type="checkbox"/> L <input type="checkbox"/> M <input type="checkbox"/> H	<input type="checkbox"/> L <input type="checkbox"/> M <input type="checkbox"/> H	<input type="checkbox"/> L <input type="checkbox"/> M <input type="checkbox"/> H	<input type="checkbox"/> L <input type="checkbox"/> M <input type="checkbox"/> H		
Time segment							
Not Identified	Activity						
	Student Engagement	<input type="checkbox"/> L <input type="checkbox"/> M <input type="checkbox"/> H	<input type="checkbox"/> L <input type="checkbox"/> M <input type="checkbox"/> H	<input type="checkbox"/> L <input type="checkbox"/> M <input type="checkbox"/> H	<input type="checkbox"/> L <input type="checkbox"/> M <input type="checkbox"/> H	<input type="checkbox"/> L <input type="checkbox"/> M <input type="checkbox"/> H	
	Pace of Instruction	<input type="checkbox"/> S <input type="checkbox"/> R <input type="checkbox"/> F	<input type="checkbox"/> S <input type="checkbox"/> R <input type="checkbox"/> F	<input type="checkbox"/> S <input type="checkbox"/> R <input type="checkbox"/> F	<input type="checkbox"/> S <input type="checkbox"/> R <input type="checkbox"/> F	<input type="checkbox"/> S <input type="checkbox"/> R <input type="checkbox"/> F	
	Cognitive Activity	Remember	① ② ③	① ② ③	① ② ③	① ② ③	① ② ③
		Understand	① ② ③	① ② ③	① ② ③	① ② ③	① ② ③
		Apply	① ② ③	① ② ③	① ② ③	① ② ③	① ② ③
		Analyze	① ② ③	① ② ③	① ② ③	① ② ③	① ② ③
		Evaluate	① ② ③	① ② ③	① ② ③	① ② ③	① ② ③
	Learning Director	① ② ③ ④ ⑤	① ② ③ ④ ⑤	① ② ③ ④ ⑤	① ② ③ ④ ⑤	① ② ③ ④ ⑤	
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Pre-Observation Interview (Attach the lesson plan to this form)

1. Were students in this class pre-assigned in accordance with their academic ability or achievement level? _____
2. If students in this class have been identified as having High Ability (or G/T) or as having an Individual Education Plan for special education services, is the teacher licensed in that area? _____ If yes, which area? _____
3. Are the materials to be used in this lesson for high ability students written above grade level? _____ Are any of the standards to be addressed in this lesson above grade level standards? _____
4. Who developed this lesson? ___ This teacher or ___ Other: _____ How closely will you be following the pre-designed lesson plan?
5. Are differentiation strategies being used so that different students have different levels of activities, directions, or expectations? _____ Yes (multiple identified students)
 ___ Yes (single identified student)
 ___ Yes (not related to identified status, but current skill level)
 ___ Yes (IEP-determined)

___ No (all students are completing the same activities)

6. Has any of this lesson been compacted for any child? If so, please explain the alternate learning activities that are substituting for the lesson.
7. Were students pre-assessed for content knowledge so that some will not be participating in this content?
8. What are the goals/objectives of this lesson?
9. Anything else the teacher wants to add before the observation:

Classroom Observation - Use Form Above with Coded Segments

1. Total number of students: _____ Number from identified group: _____
2. List additional adults in room, including time in room, role, and number of children served:

At the conclusion of the segment ratings, complete the following items, PRIOR TO the teacher debriefing.

3. Describe how grouping (if any) occurred in this classroom:
4. Did the teacher demonstrate high level content knowledge for the lesson topic? ___Yes ___No
5. Were differentiated practices used in the classroom for Identified and Not-Identified students? ___ Yes ___ No

Post-Observation Debriefing & Reflection

Debriefing with Teacher - Thank the teacher for the observation period, and use this last segment of approximately 5 minutes to clarify anything observed. Then, ask the teacher: Is there anything you wanted to add regarding the observation before I leave? (take detailed notes)

Final Reflection - After leaving the classroom, take a couple of minutes to make any other written comments that will help you remember what you saw or make the observation more contextually-based or comprehensive. Such issues may include the tone, demeanor, or attitude of the teacher and/or students.

NOTE: This is a Field Study Edition. We are interested in your feedback to make this both reflective of good practice and a useful tool for improvement of instruction. Contact us at klspeirsneum@bsu.edu

ONLINE RESOURCES FOR TEACHERS OF HIGH ABILITY STUDENTS

IDOE High Ability Education Website

www.doe.in.gov/highability

High Ability Education Toolkit – Moodle

<http://moodler.doe.in.gov/> **Enrollment key = criticalthinking**

Learning Connection Communities

- IDOE – Teachers of Students with High Abilities
- Identification of High Ability Students – Online high ability identification discussion forum

Google+ Online Communities of Practice – High Ability

Organizations

Indiana Association for the Gifted

www.iag-online.org

National Association for Gifted Children

www.nagc.org

GLOSSARY OF TERMS

Ability Grouping: Students are grouped by ability and readiness level. Groups can be formed and reformed to meet varied instructional purposes. Ability grouping is NOT synonymous with "tracking."

Ability Test (also called a measure of potential or aptitude): Evaluating the potential performance of high ability students usually through the use of intelligence or cognitive ability tests that test more than one reasoning ability: verbal, quantitative and nonverbal.

Academic Excellence: Expecting each student to work at maximum level toward a set of external standards as defined by state, district, and/or school. Learning and performing for each student should be at a challenge level commensurate with each student's skills and developed abilities.

Accelerated Learning: Pacing students through the curriculum at a rate commensurate with their advanced ability. Students may or may not be formally identified as high ability to participate in some forms of accelerated learning. Gifted students need more than just acceleration; they need enrichment of their learning experiences as well.

Achievement Test: A test that measures the extent to which a student has mastered the skills and knowledge of a particular subject and/or grade level.

Advanced Placement (AP): Any of the approximately 35 classes endorsed by the College Board in which a secondary student can earn college credit by successfully meeting criteria established by higher education institutions on a nationally given and scored Advanced Placement examination. Students also earn high school credit upon successful completion of the course(s). AP Scores are in the range of 1-5, with scores of 3, 4, or 5 being highly correlated with college graduation.

Affective Learning: Incorporating into the curriculum opportunities for students to address social and emotional issues, attitudes, and appreciations of self and others.

Alternative Assessment: Assessments that provide additional information about a child's ability beyond what may be gleaned from traditional testing. Also referred to as other forms of assessment

At-Risk: Students who may underachieve or who may drop out of school. Unmet economic, physical, emotional, linguistic, and/or academic needs may inhibit a student's ability to learn or attend school.

Authentic Assessment: Process of evaluating student learning using student products or performance instead of traditional standardized tests.

Behavioral Rating Scale/Checklist: A checklist or scale that reports the frequency or extent to which an individual demonstrates specific actions or characteristics. Caution: When using these for identification, it is important that the items on the scale or checklist be relevant to the specific services to be provided.

Between-Class Grouping: The practice of “trading students” among teachers at a particular grade level so that each teacher has a narrower range of abilities for the chosen subject or topic.

Cluster Grouping: The practice of identifying a small group of high ability students at a grade level and placing them in the same classroom at that grade level with a teacher who is best suited and qualified to work with high ability students.

Core Curriculum: The common knowledge and skills to be learned by all students of a particular grade; reading, writing, mathematics, history, social studies, and science constitute the core curriculum.

Creative Problem-Solving — The act of working on challenging problems and projects through the use of six steps: mess-finding, data-finding, problem- finding, idea-finding, solution- finding, and acceptance-finding (Isaksen, Treffinger, Dorval & Nollar, 2000).

Creative Thinking — Involves creating something new or original. It involves the skills of flexibility, originality, fluency, elaboration, brainstorming, modification, imagery, associative thinking, attribute listing, metaphorical thinking, forced relationships. The aim of creative thinking is to stimulate curiosity and promote divergence (Bloom, 1956).

Credit by Examination: The student is awarded advanced standing credit or the ability to be placed in a higher level class) by successfully completing some form of mastery test or activity.

Criterion-Referenced Test: A test to determine whether the student has achieved specific skills or concepts, such as grade level standards. Each individual is compared with a preset standard for acceptable achievement, not compared to other students. This type of test may limit the demonstration of knowledge for students with high ability.

Critical Thinking — Critical thinking is the intellectually disciplined process of actively and skillfully conceptualizing, applying, analyzing, synthesizing, and/or evaluating information gathered from, or generated by, observation, experience, reflection, reasoning, or communication, as a guide to belief and action (Paul, 1987).

Cross-Grade Grouping: The practice of placing students in a particular subject so that they are with other students who are ready for instruction at that particular grade level, regardless of their current grade in school.

Curriculum Compacting: A process used to give students validation for what they already know. It allows students who demonstrate mastery to omit portions of assigned curriculum, or to move more quickly through curriculum than would be typical. Students are thus able to "buy time" which can be used to accelerate content or to pursue enrichment activities while the unit is being taught to other students.

Curriculum & Instructional Strategies Plan: A plan that details how the curriculum and instruction are differentiated in breadth or depth of content to meet the needs of one or more high ability students in each grade level, K-12. It also indicates how the curriculum for high ability students is differentiated from the general education curriculum to promote such things as higher order thinking, decision making, creative problem solving, and effective researching. This should include a Scope and Sequence or Curriculum Map to show the K-12 articulation of the curriculum for high ability students.

Differentiation: Adapting the curriculum to meet the unique needs of learners by making modifications in complexity, depth, and pacing. It may include selecting, rather than covering all, the curriculum areas dependent on the individual needs of students. Differentiation in general can be by readiness, interest or learning style. However, when differentiating for students with advanced potential, curriculum and instruction should be at an appropriately high level of challenge first, and then can be further differentiated along other dimensions.

Disaggregated Data: Data that is separated by race, ethnicity, free/reduced lunch, language proficiency, gender, presence of an IEP, or accommodations.

Domain: "Domain" includes the following areas of aptitude and talent frequently covered in state definitions: general intellectual, creativity, specific academic, visual and performing arts, and leadership. Additional domains of talent may be mentioned in specific state definitions.

Dual/Concurrent Enrollment: This practice allows a student of high ability to attend classes in more than one building level during the school year and receive credit for a parallel course at a higher level. This can also be when high school students take high school and college classes simultaneously.

Early Entrance: Students begin their elementary school or college education prior to the designated chronological age of entrance.

Early Graduation: Acceleration options have allowed the number of years a student spends in mastering the K – 12 curriculum to be shortened and makes possible early high school graduation.

Early Matriculation: Enrollment in college before completion of the usual seven or eight semesters of high school. This usually involves meeting diploma requirements through a combination of course completions and demonstration of proficiency in one or more required areas.

Enrichment: Activities that supplement the core curriculum. Such activities may or may not be specified in the curriculum; they are frequently selected by the teacher and/or students in a given classroom. Enrichment, by itself, is not enough for high ability students. However, both enrichment and acceleration are elements of a good curriculum for high ability students.

General Intellectual: "General intellectual" means understanding facts and concepts, developing skills and generalizations, and evaluating their relationships as they apply to a broad array of disciplines.

Gifted and Talented: There is no single, widely accepted definition of “gifted” or “talented.” Identification criteria used to determine who will participate in services or programs may vary by state and/or by local district.

Governing Body: Local Education Agency or board of education (school board).

Grade Skipping: Students progress through grade level instruction skipping one or more grades.

Guidance and Counseling Plan: The plan outlines the differentiated services within the district to meet the specific affective needs and educational career plans of the students of high ability. It may include topics such as:

- academic program planning,
- career & life planning,
- organization & management skills,
- the meaning of giftedness,
- stress management, and
- individual-, small-, or large- group counseling sessions.

Heterogeneous/Homogeneous Grouping: Grouping heterogeneously generally occurs by chronological age level and without regard for the diverse needs of students. Homogeneous grouping is based on common criteria such as the students' interests, special needs, or academic abilities.

High Ability Student: This is sometimes a relative term; a sample definition would be: "high ability student" means a student who performs at, or shows the potential for performing at, an outstanding level of accomplishment in at least one (1) domain when compared to other students of the same age, experience, or environment; and is characterized by exceptional gifts, talents, motivation, or interests.

Honors Class: Classes at the middle school/junior high or high school level in which content, pace, or depth of instruction is accelerated and/or enriched when compared to the general education curriculum. Traditionally, students who meet prerequisite criteria are accepted into these courses. These courses may include students other than those identified as high ability by the school district.

Independent Study or Self-Directed Study: Allowing students to follow individual or self-selected areas of interest and specific aptitude by designing and implementing their own study plans. Close monitoring by teachers is an essential component of independent study. It is good to have carefully constructed outlines of expectations and product rubrics to ensure rigor and the meeting of program goals.

Individualization: Providing a specific program that meets the particular needs, interests, and/or abilities of an individual student for some part of his/her educational experience. It does not mean, however, that every child is working in isolation on a different level or a different subject at all times. It does mean that students are working on levels commensurate with their assessed ability, needs, and/or interests.

Individualized Education Plan/Program (IEP): A written document that describes how a student will access a variety of high ability services that may include the use of several service options.

Intelligence Quotient (IQ): A measure of ability or aptitude at a given point in time, comparing children of the same chronological age. It is a test designed to measure one's potential for learning including abstract thinking and reasoning, knowledge acquisition, and problem-solving abilities. Originally it was considered to be the sole way of measuring student ability. Current thinking now accepts IQ as one of the many ways to measure a student's academic potential.

International Baccalaureate (IB): A rigorous international pre-university course of study, leading to examinations, that meets the needs of highly motivated and academically superior secondary school students. IB has a comprehensive classics curriculum (languages, sciences, mathematics, and humanities) that allows its graduates to fulfill education requirements of various nations. Only schools approved by the IB organization may offer the program. Also, school fees are charged by the IB organization. Programs are available for elementary and middle school, but these are not part of the diploma program.

Magnet School or Magnet Program: Many school districts, especially those with large student enrollments, select individual schools to emphasize particular programs or services. Some magnet programs focus on specific learning areas such as math, science, or performing arts. Others are designed to serve a specific student population such as high ability students. Since space is usually limited, special entrance requirements may apply.

Mandated Program: A legally required program or action authorized by law.

Mentorships: The practice of placing a student with an expert or practicing professional in a particular area of interest to the student. The student would learn about or study the interest area intensely with the mentor. This is usually an option that occurs outside of the normal school day.

Metacognition — The process of understanding one's own thinking abilities, and understanding what one does and does not know, as well as reflecting on learning plans and strategies, and monitoring interpretations, perceptions, decisions and behaviors.

Multifaceted Assessment: means collecting and analyzing data to identify the educational needs of high ability students through the following:

- Performance-based assessment, which includes evaluating the performance of students involved in complex learning opportunities usually through the use of achievement tests.
- Potential-based assessment, which includes assessing verbal, quantitative, and nonverbal reasoning to evaluate the potential performance of high ability students. This evaluation can be through the use of instruments, such as standardized intelligence or cognitive ability tests.
- Other forms of assessment, frequently descriptive in nature and known as qualitative assessments. Qualitative measures such as rating scales, portfolios, structured observations or interviews can provide important information about advanced performance or advanced ability if they are selected/designed to provide information about abilities in areas of services provided.

Multifaceted Assessment Plan: outlines the instruments used to identify students of high ability and must include at least one norm-referenced performance-based measure, one norm referenced potential-based measure, and one other form of assessment.

Nomination: A referral process for consideration of a student into a specialized program.

Norm-Referenced Test: A test used to determine an individual's status with respect to the performance of other individuals on that test. A "norm" group is the large number of examinees who have taken a particular test and whose scores form the basis of the norms. Such a test may be based on national norms, state norms, or local norms. At every level of educational test usage, it is necessary to match the scope of the test with the purpose that test is supposed to perform.

Off-Grade Level Tests: A test that is one or more grade or age level(s) above the student's actual grade placement or age used to assess a student's ability or achievement.

Performance-Based Assessment — Forms of assessment that require students to demonstrate skills and understanding by active means, including written elaborated responses, physical manipulation, oral reports and presentations, and products of various types.

Portfolio Assessment: A collection of student products used to measure student progress and achievement. A collection of student products is often used to determine the appropriateness of placement. This practice allows students to demonstrate a wide variety of abilities and talents that traditionally are not measured well by standardized tests. Material in a portfolio may be student selected.

Potential-Based Assessment: Evaluating the potential performance of students of high ability through the use of instruments, such as: standardized intelligence tests or tests of verbal, quantitative and non-verbal reasoning.

Problem Based Learning (PBL) — A form of discovery learning where teachers give students a real world problem that they must work through by reflecting on what they know, what they need to know and then using appropriate resources to find out. Students learn about the subject area as they work toward the problem's resolution (Stepien & Gallagher, 1997).

Professional Development Plan: The plan describes the opportunities provided by the school district to promote professional growth in all areas of high ability services. This plan may include:

- assistance for personnel to attain university coursework or licensure in gifted education
- district in-services for teachers, administrators, paraprofessionals, and volunteers;
- staff release time for attending workshops, seminars, conferences, etc;
- resources within the corporation; and
- study groups within the corporation.

Program for Students of High Ability: “Program” means the range of educational services differentiated in depth and breadth designed to meet the needs of one or more students of high ability through activities such as compacting, acceleration, enrichment, critical thinking, and problem solving.

Pull-out Program: Students with advanced potential are pulled from their regular classrooms to work with each other and a resource teacher to facilitate accelerated and/or enriched learning experiences. To be effective in increasing student achievement in a particular subject area, this option needs to replace the regular grade level instruction in one or more areas of core curriculum and occur on a daily basis.

Qualitative Assessment: Measures that provide more descriptive information about a child’s ability or performance in a given area such as portfolio, rating scales. They are not tests.

Reliability: The consistency of an instrument/test over time; the accuracy and repeatability of a measurement.

Scaffolding — The support structures provided by teachers and others in supporting the learner's development and content mastery (Vygotsky, 1987). For purposes of the High Ability Project, scaffolding refers to the deliberate use of graphic organizers for purposes of organizing information on relevant concepts, problems or ideas.

Screening Measure: A brief, less reliable instrument used to find the top 20-25% of each demographic subgroup that will take a longer identification measure.

Self-Contained Classroom: A programmatic term defining a homogeneous setting of students with common needs and/or abilities. The class can include multiple grades or ages.

Socio-emotional: The social and emotional needs of the student; affective domain.

Specific Academic: One of the domains of high ability. “Specific academic” means understanding facts and concepts, developing skills and generalizations, and evaluating their relationships as they apply to specific disciplines, such as English language arts, social studies, foreign languages, mathematics, and sciences.

Stakeholder: Persons with interest in the programming for students of high ability; e.g. administrators, school board members, community members.

Stakeholder Planning Committee: means a diverse group with representation from educators, parents, students, community members, and other stakeholders; organized for the purposes of planning and development of programs for students of high ability.

Standardized Test: A standardized test is one that is administered under standardized or controlled conditions that specify where, when, how, and for how long children may respond to the test items. Standardized tests should meet acceptable [standards for technical qualities](#) in construction, administration, and use.

Subject-based Acceleration: Any option that allows a gifted student to gain exposure to advanced content and skills beyond the average curriculum standards that are expected for a certain age or grade.

Subject Skipping: Allows a student to be placed in classes with older students for part of the day (or with materials from higher grade placements) in one or more subject areas.

Systematic Program Assessment Plan: The plan shows the procedures for assessing the effectiveness of the district's program for high ability services. It may include topics such as:

- schedule for reviewing and updating the current program,
- instruments and methods for evaluating program effectiveness,
- procedures for data collection, and
- recommendations for change.

Twice-Exceptional: Students with needs and characteristics of more than one special population, e.g. gifted and learning disabled.

Underachieving: A discrepancy between recognized potential and actual academic performance. The causes of underachievement may be social, emotional, physical, and/or academic.

Validity: The degree to which a test/assessment measures what it purports to measure.

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